Cordless Hand Scanner Series 7 with *Bluetooth*® Wireless Technology

For Symbian Series 60 & Series 80

Featuring a Bluetooth enabled bar code scanner and SocketScan software for wirelessly scanning bar codes into Bluetooth enabled Symbian Series 60 and Series 80 Smartphones

User's Guide







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Socket Communications, Inc. 37400 Central Court Newark, CA 94560 USA

Other than the above, Socket Communications can assume no responsibility for anything resulting from the application of information contained in this manual.

Please refrain from any applications of the Socket Cordless Hand Scanner that are not described in this manual. Please refrain from disassembling the Cordless Hand Scanner. Disassembly of this device will void the product warranty.

You can track new product releases, software updates and technical bulletins by visiting Socket's web page at: www.socketcom.com.

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1 | Introduction

If you need to collect bar coded data but don't want to be tied to your mobile or desktop computer, Socket's Cordless Hand Scanner (CHS) Series 7 with *Bluetooth* wireless technology is just what you're looking for. This innovative device combines the power of laser bar code scanning with the convenience of *Bluetooth* wireless technology in a single compact, lightweight device that is ergonomically designed to fit comfortably in the palm of your hand.



Bar code scanning is the most efficient way to collect data from a mobile device. If the data to be entered is bar coded, using a laser scanner is 50 times faster and 10,000 times more accurate than manual data entry.

Bluetooth wireless technology transforms how devices connect with each other, offering you new possibilities for using your Smartphone with other devices. With Socket's Cordless Hand Scanner (CHS), you can scan bar codes while connected to the Smartphone in your pocket, without the hassle of cables or the awkwardness of a protruding antenna.

About the Software



SocketScan

SocketScanTM enters scanned data directly into any open Symbian Series 60 or Series 80 program, as if the data were manually typed. You can configure Prefix/Suffixes and assign a beep tone to signify good data reads into your Smartphone. Additionally, you can change the frequency of the beep tone or enable/disable bar code symbologies with just the press of a button.



For software updates, please register your product at: www.socketcom.com/prodreg and submit a request for the latest software. Since this Symbian version of SocketScan must be licensed, updates are not available from Socket's download site.

About Combining Scanning with Bluetooth

The Cordless Hand Scanner represents an optimal combination of proven laser bar code scanning technology and state-of-the-art *Bluetooth* wireless connectivity. Because of the problems inherent in the intermittent storage of scanned data in on-board memory if the *Bluetooth* connection is lost, the CHS is designed to operate only when connected to the host, with the powerful Class 1 radio providing the maximum possible connection range.

The user is advised of the connection status with a single beep when the CHS connects to the host and a double beep when the connection is closed or lost. As with any wireless device, connectivity range can be affected by a variety of environmental variables.



The most likely source of errors in any cordless scanning system is not in the scanning and decoding process, but in the transmission of the data to the host. Using Socket's *Error-Proof Protocol* (patent pending), the beeper and green LED signals provided by the CHS confirm not only a successful scan but also the successful transmission of the scanned data to the host. Users familiar with bar code scanning may notice a slight delay between the successful scan and shut off of the laser and the beep and green LED from the CHS confirming completed transmission of the data. In most instances, this delay is less than 250 ms (milliseconds), but may be slightly longer as the connectivity range limit is approached.

System Requirements

Your Smartphone should meet these minimum requirements:

- Symbian Series 60 or 80
- Bluetooth wireless technology

Depending on how you plan to install the SocketScan software, you will also need one of the following:

- A method for synchronizing your Smartphone with desktop or laptop PC. This requires synchronization software for you phone as well as connection hardware, such as *Bluetooth* hardware for your PC, a serial/USB cable or cradle, etc.
- A method for transferring files to your Smartphone from a desktop or laptop PC, such as a *Bluetooth* file transfer hardware and software on your PC, infrared, email or SMS message attachments, a serial/USB cable or cradle, etc.

Only version C or later of the Socket Cordless Hand Scanner works with the SocketScan for Symbian software. To verify the version of your CHS, open the battery compartment and check the sticker above the batteries. The CHS version letter follows the part number, (e.g., P/N 8550-0005C denotes CHS version C).

Note: The Nokia PC Suite software does not work with the IVT BlueSoleil software for Windows XP included with Socket's CF Connection Kit with Bluetooth Wireless Technology. If using the Socket CF Connection Kit to wirelessly connect your PC to a Nokia phone, use BlueSoleil to transfer the software to your phone, then install the software from your phone.

Package Contents

The Socket Cordless Hand Scanner package includes these items:

- Socket Cordless Hand Scanner with Bluetooth Wireless Technology
- AC charging adapter with international plugs
- 2 NiMH rechargeable AAA batteries
- Lanyard with retractable tether
- Software Installation CD
- Booklets with copyright, warranty, and regulatory compliance information



Product Registration

Socket highly recommends that all customers register their Socket products. Product registration is required for technical support. Register online at: www.socketcom.com/prodreg



Hardware Features

Rechargeable Battery and AC Adapter

Recharge the internal battery by using the included AC adapter. The adapter rating is 5V, 2A, positive pole center. A fully charged battery should provide roughly 8 hours of normal operation.



WARNING: Charge ONLY NIMH batteries in the CHS. Damage may result if other battery types are charged. Do not store the CHS for more than 30 days with the batteries installed.



WARNING: Do NOT charge the CHS from a USB port on your desktop, laptop or tablet computer — damage may occur on your computer as a result.



The red Battery Status LED will not function properly if standard AAA non-rechargeable batteries are being used...

Besides the included AC adapter, you can also recharge the CHS by using any of the following:

- Socket's Mobile Power Pack. For more information, please visit: www.socketcom.com/product/AC4009-541.asp
- AC and DC adapters of most recent Pocket PCs from Casio, Dell, Fujitsu, HP, and Toshiba are also compatible.

Status Indicator LED

LED	LED Activity	Meaning
Bluetooth Status (Blue)	1 blink per second	Bluetooth radio is on, but not connected.
	1 blink per 5 seconds	Bluetooth radio is on, connection established.
Good Read (Green)	Green	Data successfully scanned and transmitted to host device. This setting can be enabled/disabled.
Battery Status (Red)	1 blink per second	Less than 20% of battery life remaining.
	Solid red	Batteries are charging.
	Off when connected to charger	Batteries are fully charged.

Status Indicator Beeps

The scanner beeps to signal the *Bluetooth* connection status. Optionally, you can also set the scanner to beep every time it successfully scans data and transmits it to the Smartphone.

LED	Beep Pattern	Meaning
Bluetooth Status (Blue)	1 beep	Connection to host device has begun.
	2 beeps	Connection to host device has ended.
Good Read (Green)	1 beep	Data was successfully scanned and transmitted to host device. This setting can be enabled/disabled, and the beep frequency can be modified.

Touch Screen Stylus

The touch screen stylus in the tail of the CHS can be removed with small pliers if desired.



WARNING: Do not use the stylus if damaged. A damaged stylus may scratch the display screen of your computer.

2 | Setup for Symbian S60/S80

This chapter explains how to install and use the Cordless Hand Scanner (CHS) with a *Bluetooth* enabled Symbian Series 60/80 Smartphone.

Setup Summary

STEP 1: Install batteries and attach tether.

STEP 2: Charge the scanner.

STEP 3: Uninstall other scanning software.

STEP 4: Install the software.



STEP 1: Install Batteries and Attach Tether

1. Use a coin or screwdriver to unlock and remove the battery cover. Turn the lock underneath the scanner to a horizontal position. Remove the casing.



2. Install the batteries in opposite directions, as indicated by the positive symbols.



WARNING: Do not install the batteries incorrectly. Damage may result.

- 3. If desired, attach the tether. Wrap the string loop around the inside part of the lock.
- 4. Replace the battery cover and lock it into place.
- 5. If desired, attach the tether to a lanyard or belt loop.

STEP 2: Charge the Scanner

Use the included AC adapter to charge the Cordless Hand Scanner. The scanner's NiMH batteries must be charged for at least 4 hours before the first use. The Battery Status LED will emit a solid red light while charging, and turn off when the batteries are fully charged.



WARNING: Do not use the scanner when it is being charged, or the battery may have problems achieving a full charge in the future.

Do not attempt to charge alkaline batteries — this may cause alkaline batteries to leak and damage the CHS.



The red Battery Status LED will not function properly if standard AAA alkaline batteries are being used.

STEP 3: Uninstall Other Scanning Software

Delete any bar code scanning software you may already have installed on your Smartphone.

Symbian Series 60

- 1. Make sure the bar code scanning software is closed.
- 2. Go to Menu | Manager to find installed applications. Highlight existing scanning applications, and select Options | Remove.
- 3. Press Yes to confirm removal of the program.

Symbian Series 80

- 1. Make sure the bar code scanning software is closed.
- Go to Desk | Tools | Control panel | Data management | | Application Manager.
- 3. Select the application in the list and press Remove.
- 4. Confirm removal of the program.

STEP 4: Install the Software

You can install the SocketScan software into your Smartphone via either of the following methods:

- Install the software via the phone's synchronization software (Recommended). This requires synchronization software for your phone, as well as a data transfer mechanism, such as a serial/USB cable or cradle, *Bluetooth* enabled PC, infrared, etc.
- Transfer the software to your phone, then install from the phone this requires a file transfer mechanism, such as a *Bluetooth* enabled PC, infrared, or an email or SMS attachment.

Note: The Nokia PC Suite software does not work with the IVT BlueSoleil software included with Socket's CF Connection Kit with Bluetooth Wireless Technology. If using the Socket CF Connection Kit to wirelessly connect your PC to a Nokia phone, use BlueSoleil to transfer the software to your phone, then install the software from your phone.

Install the software via the phone's synchronization software.

1. Insert the SocketScan Installation CD into your host PC.



2. Connect the phone to the PC. You can establish either a cabled or wireless connection. For instructions, refer to the user documentation for your phone and connection hardware/software.



3. Start the synchronization software on the PC. Use the synchronization software to install the SocketScan_s60.SIS or SocketScan_s80.SIS file from the CD into the Smartphone. For instructions, refer to the user documentation for your synchronization software.



Note:

- The Nokia PC Suite is shown above. Your software may differ.
- For some Smartphones, synchronization software and/or hardware may be available separately.
- 4. When installation is complete, disconnect the phone from your PC.

Transfer the software to your phone, then install from the phone

1. Insert the SocketScan Installation CD into your host PC.



 Connect the phone to the PC and transfer the SocketScan_s60.SIS or SocketScan_s80.SIS file from the CD to the phone. You can establish either a cabled or wireless connection to transfer the file via *Bluetooth*, infrared, an email or SMS attachment, etc. For instructions, refer to the user documentation for your phone and connection hardware/software.

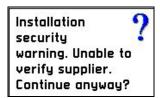


Note: If you want to wirelessly transfer the SIS file from a PC equipped with the Socket CF Connection Kit, refer to Page 15 for instructions on using the BlueSoleil software for a Bluetooth file transfer.

3. Navigate to the SocketScan_s60.SIS or SocketScan_s80.SIS file on your Smartphone. Open the file by selecting it, then pressing on the joystick/cursor. Depending on how you transferred the SIS file to your phone, it may appear in your phone's Inbox and/or as a message attachment that you must first retrieve.



4. Installation screens will appear on your phone. If an Installation Security Warning appears, press Yes to continue anyway.



5. When asked if you want to install Socket Keyboard Wedge, press Yes.



6. When presented with installation options, select Install and press OK.



7. Follow the remaining screens to complete the installation. When installation is complete, disconnect the phone from your PC.

Bluetooth File Transfer via Socket CF Connection Klt

1. Make sure the SocketScan Installation CD is inserted into your PC.



- 2. Turn on your phone and make sure it is ready for a *Bluetooth* connection. Refer to your phone's user documentation for instructions.
- 3. Make sure the Socket card is inserted and start BlueSoleil.

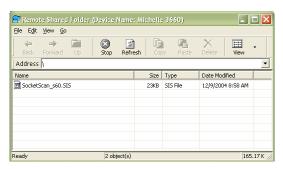


- 4. In BlueSoleil, click on the red ball to begin a device search.
- After the search, double-click on the icon for your Smartphone. The File Transfer Service icon should become highlighted. Click on the File Transfer Service icon.





- 6. If prompted, enter a passkey on both devices to pair them.
- 7. Your Smartphone will ask if you want to connect to the PC. Press Yes.
- 8. The Remote Shared Folder screen will appear. Drag and drop a copy of the SocketScan_s60.SIS or SocketScan_s80.SIS file from File Explorer into the Remote Shared Folder screen. The SIS file should transfer to your Smartphone.



- 9. Your phone may alert you that the file was received. Navigate to the SocketScan_s60.SIS or SocketScan_s60.SIS file, which may appear in your phone's Inbox. Open the SIS file.
- 10. Installation screens should automatically begin. Follow the screens on your phone to complete the software installation.

3 | SocketScan for Symbian S60

This chapter explains how to use SocketScan on a Symbian Series 60 device. Make sure you have completed the setup instructions in Chapter 2 before you begin the instructions in this chapter.

This chapter covers the following user scenarios:

- How do I connect the scanner to the phone?
- How do I scan data into my application?
- How do I select the symbologies to be read?
- How do I configure the scanning settings?



How Do I Connect the Scanner to the Phone?

Note: Nokia 3660 screens are shown. Your device screens may vary slightly.

 Turn on the Cordless Hand Scanner. Press the small power button for five seconds, until you see the LED turn blue. The LED should blink blue once every second to show that the *Bluetooth* radio is on but not connected. If the LED begins blinking red, the battery needs to be recharged.





WARNING: Do not use the CHS when it is being charged, or the battery may have problems achieving a full charge in the future.

- 2. Prepare your phone for a *Bluetooth* connection. **Make sure the** *Bluetooth* radio is turned on. If needed, make sure a COM port is enabled for outbound *Bluetooth* Serial communications, and note the COM port number. Refer to the documentation for your Smartphone for instructions.
- 3. Start SocketScan. In the Main Menu, select Socket and press the joystick/cursor.



4. The main screen of SocketScan will appear.



5. Press Options | Connect.





After you connect to the CHS, the Smartphone will save information about the CHS for future connections. Whenever you want to connect to a CHS again, your Smartphone will ask if you want to connect to the previous CHS..

6. Your phone will begin searching for *Bluetooth* enabled devices in range. After your phone detects the Socket CHS, press **Stop**. Select **Socket** CHS.



The Cordless Hand Scanner will appear as Socket CHS [xxxxxx], where the characters in brackets are the last 6 characters of the scanner's *Bluetooth* MAC address. If multiple Cordless Hand Scanners were detected, identify yours by checking the MAC address printed on a label in the battery compartment.

7. Your device will automatically connect to the CHS. If a passkey is requested, enter 1234. To indicate the connection, the CHS will beep once.

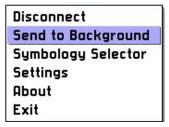




If the phone is turned off or the CHS is taken out of range, the Bluetooth connection will be lost. After the phone is turned on again or the CHS returns within range, you must reconnect the CHS with SocketScan.

For more information about the meanings of LEDs and beeps, please see page 8.

8. Send SocketScan to the background. In the main screen of SocketScan, press Options | Send to background.



9. You will return to the Main Menu of your phone. SocketScan will be running in the background, maintaining the connection to the CHS.

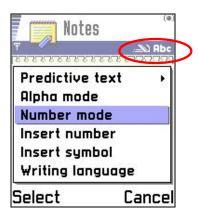
How Do I Scan Data into My Application?

1. Start the Symbian application that you want to receive the data (e.g., Notes). Make sure a document or spreadsheet is open.



2. Make sure the application is in Number Mode. The status bar near the top of the screen will display Abc if it is in Alpha Mode, and 123 if it is in Number Mode. To change the mode, press the text entry button and select Number mode.





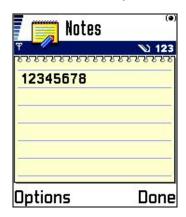
3. Press the trigger button and scan the code. For example, try this bar code:



12345678

When data is read and transmitted to your phone, the laser will turn off. Depending on the settings you chose in the Socket CHS configuration tool, the scanner may beep and/or the LED may flash green. If the Scanner fails to read data within a few seconds, the laser will turn off, and you must try again.

4. After a successful scan, data should appear in your document. For example, after you scan the code above into a Notes page, data should appear on the first line. The default "CR" (carriage return) suffix will advance the cursor to the next line, ready for the next scan.



Note:

- Wait for the "Good Scan" indication before you scan another bar code. If you try to scan too fast, the device can lock up until you stop scanning.
- If your device enters sleep mode, the Bluetooth connection may be lost, and you may need to re-connect the devices.
- For information about bar code scanning applications, please visit: www.socketcom.com/solutions

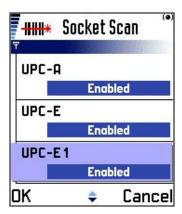
How Do I Select the Symbologies to Be Read?

The applet makes it quick and convenient to modify which symbologies you want the scanner to recognize. By default, the scanner is set to recognize nine of the most common symbologies.

1. In the main screen of SocketScan, press Options | Symbology Selector.



 In the screen that appears, symbologies will be listed along with their configuration status. To change the setting for a symbology, select it and press the joystick/cursor. After modifying all the symbology settings, press OK.





Enabling all possible symbologies will make the decode process slightly longer.

How Do I Configure the Scanning Settings?

The SocketScan applet lets you specify a variety of scanning settings, including prefixes, suffixes, the beeper frequency, and good read indicators.

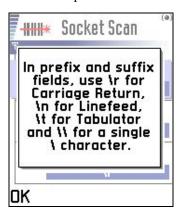
1. In the main screen of SocketScan, press Options | Settings.



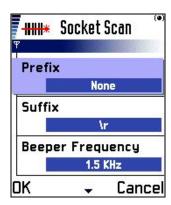


You can configure prefix/suffixes whether or not the CHS is connected to your Smartphone.

2. A screen will appear explaining special prefix/suffix options you can configure. Read the screen and press **OK**.



- 3. In the screen that appears, enter your desired scan settings.
 - Prefix/Suffix: Select to have SocketScan automatically append characters before or after each scan.



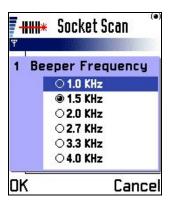
In the screen that appears, enter up to 128 characters. Press OK.



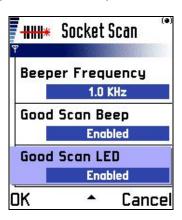


Only printable ASCII characters can be used as prefixes or suffixes. The default suffix is a carriage return.

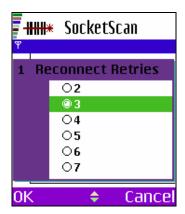
 Beeper Frequency: Select to adjust the sound of the CHS beeper. In the screen that appears, select the frequency you want. You may want to alter the frequency if using the CHS in a noisy environment. Press OK.



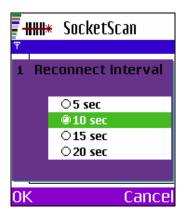
- Good Scan Beep: Select Enabled if you would like the CHS to beep every time it successfully reads and transmits a bar code.
- Good Scan LED: Select Enabled if you would like the CHS LED to flash green every time it successfully reads and transmits a bar code.



• Reconnect Retries: Select how many times you would like the Cordless Hand Scanner to try connecting back to your phone in case the *Bluetooth* connection is lost.



• Reconnect Interval: Select the time you would like the Cordless Hand Scanner to wait between reconnect retries.



• After entering your settings, press OK.

4 | SocketScan for Symbian S80

This chapter explains how to use SocketScan on a Symbian Series 80 device. Make sure you have completed the setup instructions in Chapter 2 before you begin the instructions in this chapter.

This chapter covers the following user scenarios:

- How do I connect the scanner to the phone?
- How do I scan data into my application?
- How do I select the symbologies to be read?
- How do I configure the scanning settings?



How Do I Connect the Scanner to the Phone?

Note: Nokia 9500 screens are shown. Your device screens may vary slightly.

 Turn on the Cordless Hand Scanner. Press the small power button for five seconds, until you see the LED turn blue. The LED should blink blue once every second to show that the *Bluetooth* radio is on but not connected. If the LED begins blinking red, the battery needs to be recharged.





WARNING: Do not use the CHS when it is being charged, or the battery may have problems achieving a full charge in the future.

- 2. Prepare your phone for a *Bluetooth* connection. **Make sure the** *Bluetooth* radio is turned on. If needed, make sure a COM port is enabled for outbound *Bluetooth* Serial communications, and note the COM port number. Refer to the documentation for your Smartphone for instructions.
- 3. Start SocketScan. In the Main Menu, select SocketScan and press Open.



4. The main screen of SocketScan will appear. Press Connect to search through all *Bluetooth* devices in range, or press Connect to Previous to connect to the CHS you previously connected to.





After you connect to the CHS, the Smartphone will save information about the CHS for future connections.

5. Your phone will begin searching for *Bluetooth* enabled devices in range. After your phone detects the Socket CHS, press **Stop**. Select **Socket** CHS.



The Cordless Hand Scanner will appear as Socket CHS [xxxxxxx], where the characters in brackets are the last 6 characters of the scanner's *Bluetooth* MAC address. If multiple Cordless Hand Scanners were detected, identify yours by checking the MAC address printed on a label in the battery compartment.

6. Your device will automatically connect to the CHS. If a passkey is requested, enter 1234. To indicate the connection, the CHS will beep once.





If the phone is turned off or the CHS is taken out of range, the Bluetooth connection will be lost, and the CHS will beep twice. After the phone is turned on again or the CHS returns within range, you must reconnect the CHS with SocketScan.

For more information about the meanings of LEDs and beeps, please see page 8.

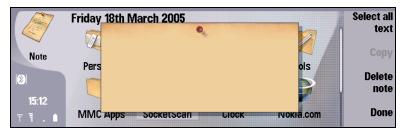
7. Send SocketScan to the background. In the main screen of SocketScan, press Send to background.



8. You will return to the Main Menu of your phone. SocketScan will be running in the background, maintaining the connection to the CHS.

How Do I Scan Data into My Application?

1. Start the Symbian application that you want to receive the data (e.g., Note, Documents, Sheets, etc.). Make sure a document or spreadsheet is open.



2. Press the trigger button and scan the code. For example, try this bar code:



12345678

When data is read and transmitted to your phone, the laser will turn off. Depending on the scanning settings you chose, the scanner may beep and/or the LED may flash green. If the scanner fails to read data within a few seconds, the laser will turn off, and you must try again.

3. After a successful scan, data should appear in your document. The default "CR" (carriage return) suffix will advance the cursor to the next line after each scan.



Note:

- Wait for the "Good Scan" indication before you scan another bar code. If you try to scan too fast, the device can lock up until you stop scanning.
- If your device enters sleep mode, the Bluetooth connection may be lost, and you may need to re-connect the devices.
- For information about bar code scanning applications, please visit: www.socketcom.com/solutions

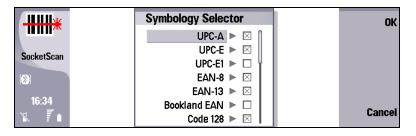
How Do I Select the Symbologies to Be Read?

The applet makes it quick and convenient to modify which symbologies you want the scanner to recognize. By default, the scanner is set to recognize nine of the most common symbologies.

1. While viewing the main screen of SocketScan, press the Menu button of your phone. Highlight Symbology Selector and press Select.



2. In the screen that appears, symbologies will be listed along with their configuration status. To change the setting for a symbology, select it and press the joystick/cursor.





Enabling all possible symbologies will make the decode process slightly longer.

3. After modifying all the symbology settings, press OK.

How Do I Configure the Scanning Settings?

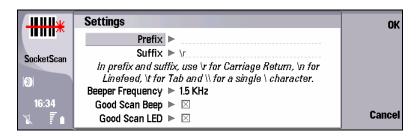
1. While viewing the main screen of SocketScan, press the Menu button of your phone. Highlight Settings, then press Select.





You can configure the scanning settings whether or not the CHS is connected to your Smartphone.

2. In the screen that appears, enter your desired scanning settings.



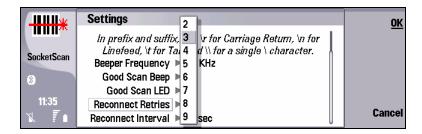
 Prefix/Suffix: Select to have SocketScan automatically append characters before or after each scan. Enter a maximum of 128 characters for each.



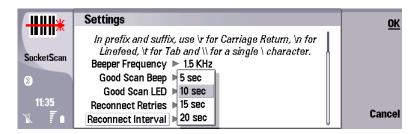
Only printable ASCII characters can be used as prefixes or suffixes. The default suffix is a carriage return.

- Beeper Frequency: Select to adjust the sound of the CHS beeper. You
 may want to alter the frequency if using the CHS in a noisy
 environment.
- Good Scan Beep: Check if you would like the CHS to beep every time it successfully reads and transmits a bar code.
- Good Scan LED: Check if you would like the CHS LED to flash green every time it successfully reads and transmits a bar code.

• Reconnect Retries: Select how many times you would like the CHS to try to connect back to the phone in case the *Bluetooth* connection is lost.



• Reconnect Interval: Select how long you would like the CHS to wait between reconnect retries.



3. After entering your settings, press **OK**.

Appendix A Specifications

Physical Characteristics

Size: 1251 x 31h x 35w (mm) 4.91 x 1.2h x 1.4w (in.)

Total Mass: approx. 90 g (0.2 lb)

Power Source: Two AAA NiMH rechargeable batteries Expected Battery Life with Normal Operation: 8,000 scans

Operating Temp: 32 to 120°F (0 to 50°C)

Operating Humidity: 5% to 95% (Non-condensing)

Operating System Support: Symbian OS Series 60 or Series 80

A separate version of SocketScan is available that supports Palm OS, Windows Mobile, Windows XP, and Tablet XP.

2005 Sunrise Date Compliant

Scanning Characteristics

Bar Code Symbologies Decoded: Code 39, UPC/EAN/JAN, MSI, Code 128, Code 93, Codabar, I 2 of 5, D 2 of 5, RSS-14

Laser: Class 1 with Fuzzy Logic (Optional Class 2 with Fuzzy Logic) *Scan Angle*: 46.5°

Laser Scanner Performance:

Scan Repetition Rate: 50 (± 3) scans/sec (bi-directional)

Decode Distances: 2.2 to 40+ inches depends on symbol size, symbology, label media, W-N Ratio, scan angle

Bluetooth Characteristics

Protocol: Bluetooth 2.45 GHz ISM band frequency hopping

Antenna: Integrated

Radio Range: Up to 330 ft (100 m), depending on environment

Connection: Point-to-point Security: Encrypted link

RF Power: Class 1 radio; Typical Output: 14 dbm

Certification/Compliance

FCC: Part 15, Class B CE: EN55024:1998

C-TICK: s.182 Bluetooth 1.1 TELEC

ETS 300 328 ETS 300 826

About Bluetooth Range

The Cordless Hand Scanner features a powerful Class 1 *Bluetooth* radio to provide the maximum possible range. As with all wireless technologies, the connection range can vary widely depending on many factors such as the brand and placement of the host device, the type and size of physical obstacles and the presence and activity level of competing radio transmissions.

In range testing of the CHS while connected to a variety of typical host devices with weaker Class 2 radios, functional connection distances from 18 to over 100 feet have been experienced depending on the environment. The following conditions appear to reduce the *Bluetooth* connection range:

- The presence of soft, absorbent materials such as paper, fiberglass insulation, foam material in office cubical walls, carpeting and, to a lesser extent, even sheetrock and wood construction materials.
- Human bodies or containers of liquid positioned between the host and the CHS.
- Metal in a grid pattern, such as chain link fencing or chicken wire. This type of material may block the *Bluetooth* (or Wi-Fi) signal completely.
- The presence and activity level of competing *Bluetooth* or 802.11 (Wi-Fi) systems using the same 2.4 GHz frequency (very slight).

Appendix B Safety and Usage Tips

About Bluetooth and Health

Bluetooth wireless technology allows you to use short-range radio signals to connect a variety of devices, such as bar code scanners, mobile phones, Pocket PCs, notebook computers, printers, LAN access points, and many other devices at home or work. These radio signals replace the cables that have traditionally connected these devices.

Bluetooth products have small radio transmitters and receivers. Output power is normally very low, only 1 mW (1/1000 of a watt). This gives a working range of approximately 10 meters.

The maximum exposure levels from *Bluetooth* products are far below recommended safety guidelines. At most, typical *Bluetooth* devices (1mW) reach only one percent of the prescribed safety levels.

Product Care

- Do not expose your product to liquid or extreme humidity.
- Do not expose your product to extreme high or low temperatures.
- Do not expose your product to lit candles, cigarettes, or cigars, or to open flames, etc.
- Do not drop, throw or try to bend the product, as rough treatment could damage it.
- Do not paint your product, as the paint could obstruct parts and prevent normal use.
- Do not attempt to disassemble your product: a broken warranty seal will
 void the warranty. The product does not contain consumer serviceable
 components. Should your Cordless Hand Scanner need service, please
 contact Socket technical support at: support@socketcom.com.
- Treat your product with care. Keep in a clean and dust-free place.
- Changes or modifications of this product, not expressly approved by Socket, may void the user's authority to operate the equipment.

Antenna Care

Do not place a metallic shield around the Cordless Hand Scanner since it will reduce the radio transmission efficiency.

Efficient Use

For optimum performance, please make sure that there is no metal surrounding your Cordless Hand Scanner.

Driving

RF energy may affect some electronic systems in motor vehicles, such as car stereo, safety equipment, etc. Check with your vehicle manufacturer to be sure that the Cordless Hand Scanner will not affect the vehicle's electronics.

Aircraft

- Turn off your Cordless Hand Scanner before boarding any aircraft.
- To prevent interference with communications systems, you must not use your Cordless Hand Scanner while the plane is in the air.
- Do not use it on the ground without permission from the crew.

Radio Frequency Exposure

Your Cordless Hand Scanner contains a radio transmitter and receiver. When in operation, it communicates with a *Bluetooth* enabled mobile computer by receiving and transmitting radio frequency (RF) magnetic fields in the frequency range 2400 to 2500 MHz. The output power of the radio transmitter is 0.001 Watt. The Cordless Hand Scanner is designed to be in compliance with the RF exposure limits set by national authorities and international health agencies when installed or used separately from other antennas or radio transmitters.

ICNIRP, "Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)", International Commission on Non-Ionizing Radiation Protection (ICNIRP), Health Physics, vol. 74, pp 494-533, April 1998.

99/519/EC, EU Council Recommendation on the limitation of exposure to the general public to electromagnetic fields 0~Hz-300~GHz, Official Journal of the European Communities, July 12, 1999.

ANSI/IEEE C95.1-1992, "Safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz", The Institute of Electrical and Electronics Engineers, Inc., New York, 1991.

FCC Report and Order, ET Docket 93-62, FCC 96-326, Federal Communications Commission (FCC), August 1996.

Radiocommunications (Electromagnetic Radiation Human Exposure) Standard 1999, Australian Communications Authority (ACA), May 1999.

¹ Examples of RF exposure standards and guidelines:

Appendix C Bar Code Label Specifications

All bar code symbols/labels should satisfy the appropriate AIM Uniform Symbology Specification.

Background Substrate:

The bar code symbol should be printed on material (media) that is reflective and has a matte (not glossy) finish. A background diffuse reflectance of at least 70% to 80% is desirable for optimum contrast. Retro-reflective media should be used to obtain decode distances greater than 36 inches.

Ink Color and Type:

The inked bars should not exceed 25% reflectance at the wavelength that is being used for reading, whether printed with black ink or colored ink. The reflectance value should not vary more than 5% within the same character.

Voids and Specks:

The code should be printed clearly, free of voids, specks, blemishes and lines that could "fool" the scanner. Specks or blemishes in the white spaces, or false or missing bar sections could be interpreted by the reading equipment as part of the code. Generally, the width of such flaws is more serious than the height. Code symbols/ labels should be rejected if these defects are present.

Definition:

The bars in the bar code symbol should be well defined. Their edges should not be rough or fuzzy, so that the bars and spaces have the proper widths intended for the bar code symbology used.

Contrast:

Background reflectance (that of the substrate on which the codes are printed) should always provide a good contrast relative to the ink reflectance (that of the code bars). The difference between the two should be at least 37.5% at the wavelength used for reading.

Tolerance:

The ratio of the widths of bars and spaces in a bar code symbol must conform to the appropriate AIM bar code specifications and can cause problems if not correct throughout the bar code. Problems can occur when bar edges are smeared or rough, or when they exhibit voids.

Appendix D **Enabling or Disabling Symbologies**

The Cordless Hand Scanner is pre-set to automatically detect and decode (auto-discriminate) the most common bar code symbologies. To enable or disable symbologies, simply use the Symbology screen, accessible from Options menu from the main screen of .SocketScan.

Notes:

- The length of some symbologies will change after Symbology Selector is used. See Table 1.
- With more symbologies enabled, the scanner must work harder to search through all the possible combinations. This may make the decoding process slightly longer.
- The advanced symbology parameters listed in Table 2 can only be modified by using the SocketScan Advanced Programming Guide or the SocketScan SDK. Check Socket's website for updates.

Table 1. Default Symbologies

Symbology	Scanner Default	Default Length	Length after Symbology Selector	
UPC/EAN/JAN				
UPC-A	Enabled	N/A	N/A	
UPC-E	Enabled	N/A	N/A	
UPC-E1	Disabled	N/A	N/A	
EAN-8	Enabled	N/A	N/A	
EAN-13	Enabled	N/A	N/A	
Code 128 (USS-128 & UCC/EAN 128)	Enabled	Any	Any	
Code 39*				
Code 39	Enabled	2 to 23	2 to 55	
Trioptic Code 39	Enabled	2 to 23	2 to 55	
Code 39 Full ASCII	Disabled	2 to 23	2 to 55	
Code 93	Disabled	2 to 38	2 to 55	
Interleaved 2 of 5*	Enabled	14 Only	2 to 55	
Discrete 2 of 5*	Disabled	12 Only	2 to 55	
Codabar	Disabled	5 to 55	2 to 55	
MSI Plessey*	Disabled	1 to 30	2 to 55	
RSS-14 (Standard, Limited, Expanded)**	Disabled	N/A	N/A	

^{*}Warning: Setting the length to "Any" may lead to inaccurate decodes of these symbologies.

^{**}This symbology will be added in the next release.

Table 2. Other Symbology Parameters

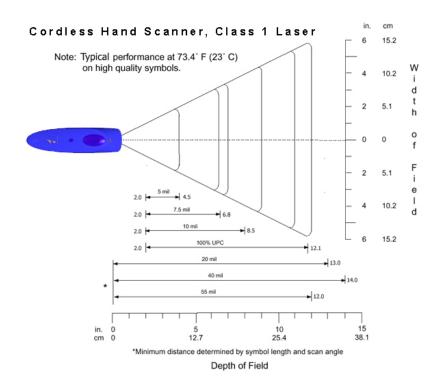
Symbology Parameters	Scanner Default	
UPC/EAN/JAN		
Supplementals	Disabled	
Transmit Check Digit	Enabled	
Bookland EAN	Disabled	
Decode UPC/EAN Supplementals	Ignore	
UPC/EAN Supplemental Redundancy	Seven	
Transmit UPC-A Check Digit	Enabled	
Transmit UPC-E Check Digit	Enabled	
Transmit UPC-E1 Check Digit	Enabled	
Convert UPC-E to A	Disabled	
Convert UPC-E1 to A	Disabled	
EAN-8 Zero Extend	Disabled	
UPC/EAN Security Level	0	
UPC/EAN Coupon Code	Disabled	
Code 39		
Convert Code 39 to Code 32	Disabled	
Code 32 Prefix	Disabled	
Check Digit Verification	Disabled	
Transmit Check Digit	Disabled	
Code 39 Full ASCII	Disabled	
Interleaved 2 of 5		
Check Digit Verification	Disabled	
Transmit Check Digit	Disabled	
Convert I 2 of 5 to EAN-13	Disabled	
RSS-14	Disabled	
RSS-14 Limited	Disabled	
RSS-14 Expanded	Disabled	

For more information on bar codes, symbologies, labels or other bar code related topics, visit any of the following web sites:

- a. www.aimglobal.org/technologies/barcode/
- b. www.aimglobal.org/aimstore/stackedsymbologies.htm
- c. www.adams1.com
- d. www.bizfonts.com
- e. www.barcode-us.com/info_center/upc.htm (UPC Codes)
- f. www.barcode-us.com/info center/bookinfo.htm (Bookland EAN)
- g. www.dataid.com/bcsymbology.htm
- h. www.aaabarcodes.com
- i. www.snx.com/mechanics.html
- j. www.pscnet.com/html/aabcsymbologies.htm#Checksums
- k. www.idautomation.com/barcoding4beginners.html

Appendix E **Decode Zone**

The decode zones for the Cordless Hand Scanner is shown below. The minimum element width ("X Dimension" or bar code "size") is the width in thousandths of an inch (mils) of the narrowest element (bar or space) in the symbol. The figures shown are the typical scanning distances (depths of field) for selected bar code sizes. The maximum usable length of a bar code symbol (Width of Field) at any given range is also shown.



Appendix F Troubleshooting

SYMPTOM:

When I try to scan, the laser activates, but no data appears on my screen, and the laser eventually turns off.

POSSIBLE REASON	SOLUTION
The scanner is too close or too far from the bar code.	Practice so you get accustomed the most effective distance and
lai nom alo sai coaci	scanning angle.
The bar code is incorrectly	Try scanning a bar code that is
formatted or poorly printed.	correctly formatted or printed well,
	such as on a retail package.
The bar code symbology may be	Find out the bar code's
disabled or not supported by the	symbology. If needed, use the
Cordless Hand Scanner.	Symbology screen to enable the
	symbology.

SYMPTOM:

My Smartphone cannot find the Cordless Hand Scanner, and/or I get an error message saying that there are connection problems.

POSSIBLE REASONS	SOLUTION
You are too far from the Cordless	Move the devices closer together,
Hand Scanner.	within a range of 10-15 meters.
The Cordless Hand Scanner is	Turn on the Cordless Hand
not turned on.	Scanner.

SYMPTOM:

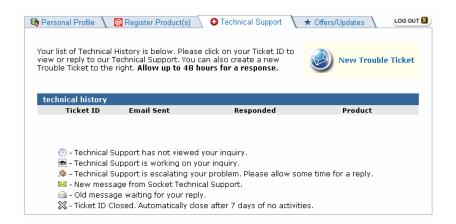
When I scan a bar code into an application, the data appears as garbage.

POSSIBLE REASONS	SOLUTION
Your Smartphone is in Alpha	Press the text entry button (pencil
Mode.	button) to change your
	Smartphone to Number Mode.

Appendix G Technical Support

If you have trouble installing or using the Cordless Hand Scanner with *Bluetooth* Wireless Technology, contact Socket's technical support department for assistance.

IMPORTANT! To obtain personal assistance from a Socket technical support engineer, you must first register your product online at www.socketcom.com/prodreg.



After you register your product, click on the Technical Support tab and click New Trouble Ticket. Follow the screens that appear to submit an online request for technical support. You can log onto the technical support website anytime to track the progress of your request. If we are unable to resolve your support inquiry via email, we can arrange for a technical support representative to call you at a specific time.

Please refrain from disassembling the Cordless Hand Scanner. Disassembly of this device will void the product warranty.

Limited Warranty

Socket Communications Incorporated (Socket) warrants this product against defects in material and workmanship, under normal use and service, for the following period from the date of purchase:

Cordless Hand Scanner: Two years

Incompatibility is not a defect covered by Socket's warranty. During the warranty period, Socket will, at its option, repair or replace the defective product at no charge when furnished with proof of retail purchase, provided that you deliver the product to Socket or to an authorized Socket Service Center.

The returned product must be accompanied by a return material authorization (RMA) number issued by Socket or by Socket's Authorized Service Center. If you ship the product, you must use the original container or equivalent and you must pay the shipping charges to Socket. Socket will pay shipping charges back to any location in the contiguous United States. This warranty applies only to the original retail purchaser and is not transferable.

Socket may, at its option, replace or repair the product with new or reconditioned parts and the returned product becomes Socket's property. Socket warrants the repaired or replaced products to be free from defects in material or workmanship for ninety (90) days after the return shipping date, or for the duration of the original warranty period, whichever is greater.

This warranty does not cover the replacement of products damaged by abuse, accident, misuse or misapplication, nor as a result of service or modification other than by Socket.

SOCKET IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING DAMAGE TO PROPERTY AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow limitation of implied warranties, or the exclusion or limitation of incidental or consequential damages, so that the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

This product may contain fully tested, recycled parts, warranted as if new.

For warranty information, phone (510) 744-2700.

Limited Software Warranty

LIMITED WARRANTY. SOCKET warrants that the original disk or CD ROM is free from defects for 90 days from the date of delivery of the SOFTWARE.

CUSTOMER REMEDIES. SOCKET'S entire liability and your exclusive remedy shall be, at SOCKET'S option, either (a) return of the price paid or (b) replacement of the SOFTWARE which does not meet SOCKET'S Limited Warranty and which is returned to SOCKET with a copy of your receipt. Any replacement SOFTWARE will be warranted for the remainder of the original warranty period or 30 days, whichever is longer. THESE REMEDIES ARE NOT AVAILABLE OUTSIDE OF THE UNITED STATES OF AMERICA.

NO OTHER WARRANTIES. SOCKET disclaims all other warranties, either express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the SOFTWARE and the accompanying written materials. This limited warranty gives you specific legal rights. You may have others which vary from state to state.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES. In no event shall SOCKET or its suppliers be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or inability to use the SOFTWARE, even if SOCKET has been advised of the possibility of such damages. Because some states do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

EXPORT LAW ASSURANCES. You may not use or otherwise export or reexport the SOFTWARE except as authorized by United States law and laws of the jurisdiction in which the SOFTWARE was obtained. In particular, but without limitation, none of the SOFTWARE may be used or otherwise exported or reexported (a) into (or to a national or resident of) a United States embargoed country or (b) to anyone on the U.S. Treasury Department's list of Specially Designated Nationals or the U.S. Department of Commerce's Table of Denial Orders. By using the SOFTWARE, you represent and warrant that you are not located in, under control of, or a national or resident of any such country or on any such list.

GOVERNMENT END USERS. If the SOFTWARE is supplied to the U. S. Government, the SOFTWARE is classified as "restricted computer software" as defined in clause 52.227-19 of the FAR. The U. S. Government 's rights to the SOFTWARE are as provided in clause 52.227-19 of the FAR.

CONTROLLING LAW AND SEVERABILITY. This License shall be governed by the laws of the United States and the State of California. If for any reason a court of competent jurisdiction finds any provision, or portion thereof, to be unenforceable, the remainder of this License shall continue in full force and effect.

Regulatory Compliance

The Socket Cordless Hand Scanner is designed to be compliant with the rules and regulations in locations where they are sold and will be labeled as required. This product is type approved — users are not required to obtain license or authorization before using.

This product has been certified as conforming to technological standards. Therefore, the following actions are punishable by law:

- Disassembly or modification of this product
- Removal of identification labels on the back of the product

The frequency used by this product is also used by industrial, scientific and medical devices, such as microwave ovens, as well as wireless detectors for motion detectors, such as those requiring licenses used on manufacturing lines or similar radio transmitters (all of these wireless devices will be called "other wireless transmitters" below). Most modern electronic equipment (e.g., in hospitals and cars), is shielded from RF energy. However, certain electronic equipment is not.

- 1. Please ensure that all medical devices used in proximity to this device meet appropriate susceptibility specifications for this type of RF energy.
- 2. In the unlikely event that there is electronic interference between this system and other wireless transmitters, quickly change the location of operation or stop operating the unit (cease signal transmission).
- 3. If other electrical interference or related problems occur, contact Socket technical support at +1-510-744-2720.

Radio Frequency Interference Requirements

This device complies with part 15 of the FCC rules and Industry Canada. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment is also ETS EN300 328-2, ETS EN301 489-1 and ETS EN301 489-17 compliant. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

This equipment generates and radiates radio-frequency energy. To comply with FCC RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied: (1) Users are not permitted to make changes or modify the system in any way, and (2) connecting external antennas to the Cordless Hand Scanner is prohibited. This device and its antenna must not be co-located or operated with any other antenna or transmitter.

To comply with Industry Canada RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied: "The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, available at Health Canada's website www.hc-sc.gc.ca/ehp/ehd/catalogue/rpb.htm"

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user may try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the radio or television.
- Increase the distance separating the equipment and the receiver.
- Connect the equipment to an outlet on a different branch circuit than that
 of the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet helpful: *How to Identify and Resolve Radio-TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402.

Canada Certification

The marking of "IC:xxxxxx-yyyyyy" on the device means: "xxxxxx-yyyyyy" is the certification number, and the term "IC" before the equipment certification number only signifies that Industry Canada technical specifications were met.

Radio Frequency Interference Requirements - Canada

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la Classe B respecte toutes les exigencies du Reglement sur le Matériel Brouilleur du Canada.

NOTE: To comply with FCC and Industry Canada exposure requirements, this device is approved for operations in a user's hand when there is a distance of 20 cm or more between the device antenna and the user's body.

CE Marking & European Union Compliance

Products intended for sale within the European Union are marked with a CE Mark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included: Normes (EN), as follows:

Applicable Directives:

- Radio and Telecommunications Terminal Equipment Directive 1999/5/EC
- Low Voltage Directive 73/23/EEC

Applicable Standards:

- EN 55 022 Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.
- EN 50 082-1 Electromagnetic Compatibility General Immunity Standard, Part 1: Residential, Commercial, Light Industry.
- IEC 801.2 Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 2: Electrostatic Discharge Requirements.
- IEC 801.3 Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 3: Radiated Electromagnetic Field Requirements.
- IEC 801.4 Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 4: Electrical Fast Transients Requirements
- EN 60 950 + Amd 1 + Amd 2 Safety of Information Technology Equipment Including Business Equipment.

LASER DEVICE:

Class 1 laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with U.S. and international regulations:

CAUTION: Use of controls, adjustments or performance of procedure other than those specified herein may result in hazardous laser light exposures.

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

PRODUCT DISPOSAL:

Your device should not be placed in municipal waste. Please check local regulations for disposal of electronic products.



Battery Warning:

- Your device contains a rechargeable NiMH battery. Never throw the battery into a fire, as that could cause the battery to explode.
- Never short-circuit the battery by bringing the terminals in contact with another metal object. This could cause personal injury or a fire, and could also damage the battery.
- Never dispose of used battery with other ordinary solid wastes. Batteries contain toxic substances.
- Dispose of used battery in accordance with the prevailing community regulations that apply to the disposal of batteries. Cover the metal terminals with insulating tape. (This is to prevent accidental short-circuiting).
- Never expose the battery to any liquid.
- Always keep the battery out of reach of infants or small children.
- Never shock the battery by dropping it or throwing it.
- Dispose of a spent or damaged battery promptly.